

Patent Application No. 09/747/850
Docket No. 99/044NUT

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

- 1.(currently amended) A multifunctional encapsulated biologically active ~~food component~~ spherical device consisting of a core which comprises at least one dietary fiber, which core is surrounded by at least one biologically active substance, in which the core and the biologically active substance(s) are encapsulated by one or more shell-forming substance(s) selected from the group consisting of one or more of the following substances: monosaccharides, disaccharides, polysaccharides, emulsifiers, peptides, proteins and prebiotic substances.
- 2.(currently amended) The ~~food component~~ spherical device as claimed in claim 1, wherein the dietary fiber is selected from the group consisting of plant fibers, water-insoluble polysaccharides, water-soluble polysaccharides, pectins, lignin and plant gums.
- 3.(original) The food component as claimed in claim 1, wherein the shell substance(s) is (are) able to form a stable complex with the core material or the biologically active substance(s) or the core material and the biologically active substance(s).
- 4.(cancelled)

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- 5.(currently amended) The ~~food component~~ spherical device as claimed in claim 1, wherein the dietary fiber is selected from the group consisting of one or more of the following substances: plant fibers, water-insoluble celluloses, water-insoluble hemicelluloses, water-soluble polysaccharides, pectins, lignins and plant gums.
- 6.(currently amended) The ~~food component~~ spherical device as claimed in claim 1, wherein the biologically active substance is selected from the group consisting of one or more of the following substances: probiotic microorganisms, prebiotic substances, enzymes, nutrients, natural or synthetic secondary plant constituents and substances having antioxidant activity.
- 7.(original) The food component as claimed in claim 1, which has a spherical or polygonal shape having a mean diameter, in the unprocessed state, of from about 1 μm to about 200 μm .
- 8.(original) The food component as claimed in claim 1, wherein the core content of the food component is from about 10 to about 90% by weight.
- 9.(original) The food component as claimed in claim 1, wherein the content of the biologically active substance in the food component is from < 1% by weight to > 50% by weight.
- 10.(original) The food component as claimed in claim 1, wherein the content of shell materials in the food component is \leq 50% by weight.

- 11.(currently amended) A process for producing a ~~food-component~~ spherical device as claimed in claim 1, which comprises introducing a biologically active substance or a mixture of two or more biologically active substances into a medium which comprises one or more shell-forming substances selected from the group consisting of one or more of the following substances: monosaccharides, disaccharides, polysaccharides, emulsifiers, peptides, proteins and prebiotic substances, then enriching the resultant mixture with one or more dietary fiber(s), wherein one or more substances selected from the group consisting of biologically active substance, the shell-forming substance and the dietary fiber comprises at least one solvent or at least one dispersion media, then homogeneously mixing the mixture and then freeing it from solvents or dispersion media.
- 12.(currently amended) The ~~food-component~~ spherical device as claimed in claim 1, wherein the polysaccharides are selected from the group consisting of hydrolyzed starches, microbial polysaccharides, plant polysaccharides, acidic plant gums, pectins and celluloses.
- 13.(currently amended) The ~~food-component~~ spherical device as claimed in claim 2, wherein the plant fiber is selected from the group consisting of wheat fibers, apple fibers and oat fibers.
- 14.(currently amended) The ~~food-component~~ spherical device as claimed in claim 2, wherein the water-insoluble polysaccharides are celluloses.
- 15.(currently amended) The ~~food-component~~ spherical device as claimed in claim 5, wherein the plant fibers are selected from the group consisting of wheat fibers, oat fibers, rice dietary fibers, apple fibers and citrus fibers.

- 16.(currently amended) The food-component spherical device as claimed in claim 5, wherein the water-soluble polysaccharides are selected from the group consisting of β -glucans, fructo-oligosaccharides and galactooligosaccharides.
- 17.(currently amended) The food-component spherical device as claimed in claim 6, wherein the nutrients are selected from the group consisting of vitamins, minerals, trace elements and amino acids.
- 18.(currently amended) The food-component spherical device as claimed in claim 6, wherein the natural or synthetic secondary plant constituents are carotenoids.
- 19.(currently amended) The food-component spherical device as claimed in claim 6, wherein the substances having antioxidant activity are flavonoids.

Respectfully submitted

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see attached limited recognition

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